

HIV-Related Knowledge and Behavior of Commercial Sex Workers: A Tale of Three Cities

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Abstract

Commercial sex workers (CSWs) have been documented as disseminating the HIV virus and other sexually transmitted infections (STIs). This study measured the HIV-related knowledge and behaviors of CSWs in three diverse population centers: Santo Domingo (Dominican Republic), Tijuana (Mexico), and Moscow (Russian Federation). Data were collected from CSWs (n=78) using a semi-structured interview format. Although respondents were aware of the HIV virus, self-reports revealed risk-taking practices. CSWs had limited skill at negotiating for reducing personal and partner risk, especially when economics was a factor. Outreach workers may be beneficial in developing a supportive role in this population to reduce risk practices and disease spread.

Introduction

The prevalence of human immunodeficiency virus (HIV) within the commercial sex industry contributes significantly to the spread of this disease worldwide (Mann, Tarantola & Netter, 1992). Sex with multiple partners, other high-risk sex practices, drug use, and inconsistent use of condoms among commercial sex workers (CSWs) have been cited as leading causes of the spread of HIV (Coates & Makadon, 1996; de Graaf, Vanwesenbeeck, van Zessen, Straver & Visser, 1993; Guenther-Grey, Schnell & Fishbein, 1995; Mertens & Carael, 1997; Richters, Donovan, Gerofi & Watson, 1988).

Research documents that low social economic status also is a factor in the spread of the virus within the industry (Carswell, Lloyd & Howells, 1989; Coates & Makadon, 1996; Jochelson, Mothibeli & Leger, 1991; Karim, Karim, Soldan & Zondi, 1995; Simonsen, Plummer, Ngugi, Black, Kreiss, Gakinya, Waiyaki, D'Costa, Ndinya-Achola, Piot & Ronald, 1990). For instance, the poor are more vulnerable to acts of violence, forced sex and street crime, less likely to request or receive police protection, and less likely to trust public health authorities (Cohen & Coyle, 1990). This vulnerability is especially true among street workers, those not associated with a brothel or escort

service, and those who do not have their own residence or dwelling (Alexander, 1992).

The National Task Force on Prostitution reports that about 1% of American women have exchanged sex for money (Alexander, 1987). The exact risk of becoming infected with HIV as a result of coming into contact with a CSW has been difficult to determine in the United States due to variations in local prevalence of disease, the extent of high-risk practices, especially injection drug use, the extent of condom use, and the array of sexual practices employed (Cohen, 1994). A Canadian report cited by Bastow (1995) indicates that prostitutes are no more likely than any other women to be infected with HIV or other sexually transmitted infections unless they are also intravenous drug users. For different groups of prostitutes in the United States and European countries, the rate of HIV infection varies from 0 to as much as 47.5% (Cohen, 1994). The female prostitute to male client transmission rate of HIV is not well studied, but female-to-male transmission rates are believed to be lower than male-to-female or male-to-male rates (Cohen, 1994). In a New York study, a transmission rate of 1.4% (female prostitute to male client) was estimated by one clinic (Chaisson, Stoneburner, Lifson, et al., 1990). Bastow (1995) cites evidence that CSWs use condoms more consistently than other populations similar in age, race, and gender. Thus, transmission rates by this mode could plausibly, be low. It is even harder to estimate the HIV

seroprevalence rate among male prostitutes. Bastow (1995) cites figures for the United States that range from 50% in one study to as low as 11%.

Internationally, outreach health workers have focused on promoting condom education, usage and availability in combating the virus among CSWs (Montague & Catino, 1996; Nzila, Laga, Thiam, Mayimona, Edidi, Van Dyck, Behets, Hassig, Nelson, Mokwa, Ashley, Piot & Ryder, 1991; Population Services International, 1996). In Thailand, an increase from 15,000 to 50,000 condoms used in the Samut Sakhon Province showed a decrease in incidence of sexually transmitted infections from 13% to 0.5% (World Health Organization, 1992). In New York City, the decline in the rate of HIV infection over a five-year period in one project was attributed to its condom distribution policy (Whitmore, Wallace & Weiner, 1996). Training, educating, and disseminating HIV information also has been a successful tool in building a defense against the virus. Peer educators in Zimbabwe (Lamprey, 1991), health care providers in Singapore (Wong, Chan, Koh & Wong, 1994-95), and outreach workers in California (Dorfman, Derish & Cohen, 1992) have shown that education reduces the spread of HIV. These studies show that condoms and education are important elements in HIV-risk reduction.

Most research on the relationship between CSWs and HIV has focused on the role of the worker as a vector of the disease, with HIV risk reduction efforts often targeting the sex worker for behavior modification. According to Coates and Makadon (1996), decreasing the rate of infection among CSWs may be more effective if less blame is placed on the worker and more research is performed about the context in which the sex work is transacted. Negotiating safer sex, while being economically dependent on the client, is difficult, especially if the client is physically overpowering or the economic status of the sex worker is low.

Purpose

The primary purpose of this study was to measure the HIV-related knowledge and behaviors of CSWs in three diverse population centers where the commercial sex trade is known widely to exist: Santo Domingo (Dominican Republic), Tijuana (Mexico), and Moscow (Russian Federation). These three cities were selected because they also happened to be at or near sites where the investigators were carrying out other health education-related research activities. A secondary purpose of this study was to identify the relationship of

knowledge and behavior on the negotiation between CSWs and their clients.

Methods

Under the supervision of members of the research team, an 18-item forced-response interview schedule was administered by trained commercial sex workers indigenous to the respective data collection locales. Items included: (1) knowledge and beliefs about HIV/AIDS, and (2) specific behaviors occurring between the workers and their clients. The survey was used as a framework for the semi-structured interviews. Additional queries were made for clarification where necessary. For example, some of the CSWs who were HIV-positive wanted to discuss their frustrations and future options, whereas others wanted additional information on birth control methods. To establish content validity, the interview schedule was expert-generated in English based on epidemiologically significant risk behaviors and common myths related to susceptibility and transmission. Subsequently, the interview schedule was translated to written Spanish by a native Spanish-speaker of the Dominican Republic, and pilot-tested for clarity with native Spanish-speakers with national origins in Puerto Rico, Mexico, the Dominican Republic, and Colombia. For the Muscovite sample, a simultaneous oral translation, rather than a written translation, was made by a peer-interviewer who was a native Russian speaker. The nature of the survey content, as well as the nature of those being surveyed (limited sampling pool) made the establishment of reliability (e.g., test/retest) and extensive pilot-testing impractical. However, reliability for survey items of a similar nature have been reported for audiences in the Dominican Republic (Westhoff, Holcomb & McDermott, 1996-97; Westhoff, McDermott & Holcomb, 1996), Moscow (Westhoff, Klein, McDermott, Schmidt & Holcomb, 1996), and the United States (McDermott, Hawkins, Moore & Cittadino, 1987; McDermott, Liller & Rosevelt, 1990; McDermott, Sarvela & Bajracharya, 1988).

Because of the different cultures represented by each setting, the means and logistics for data collection varied. Data in Santo Domingo were collected from street workers who solicited their clients on one of the city's major thoroughfares. The avenue is a busy commercial district during the day. At dusk the street changes its ambience as stores close with burglar-proof shields covering the windows and doors. At full darkness the street becomes active again with CSWs gathering in doorways or leaning against store fronts.

Few men can be seen on a normal night, with a ratio of 10 to 20 women for every male walking down the street. Interviews were conducted on two occasions on this main artery in Santo Domingo. After an initial contact had been made with a CSW (*peer-interviewer*) willing to assist in data collection, interviews were conducted from inside a parked automobile. In exchange for the interview, each CSW received ten condoms, twenty pesos (\$1.50 U.S.), and HIV educational material prepared for Spanish-speaking audiences.

Data collection occurring in Tijuana was similar to that in Santo Domingo. A peer-interviewer was again used to interview each CSW. The location was off of the main thoroughfare of the city. Unlike the venue in Santo Domingo, the area had many inexpensive hotels and establishments that served alcohol. The ratio of CSWs to clients was more difficult to estimate because of the mix of other people walking the street. The interviews were conducted on the street rather than in a car, which allowed for semi-privacy against a store window or in an adjacent alley. Condoms, money, and HIV educational material prepared for Spanish-speaking audiences comparable to that described above were again given in exchange for the information.

Data collection in Moscow was performed by a CSW approximately 40 years old, a native Muscovite who was fluent in both Russian and English. This peer-interviewer had a college degree, had worked as a professional journalist, and had traveled abroad extensively to English-speaking and other countries. In contrast to the experiences in Santo Domingo and Tijuana, the interviewer was paid for her services (\$200 U.S.), but no money or other items were given to the interviewees. Another difference between the Muscovite workers and the ones in Santo Domingo and Tijuana was the work setting where interviews were carried out. Rather than conducting business on a main avenue, most of these Muscovite CSWs were either at the street entrance or in the lobby or bar of a large hotel used exclusively by foreigners. Again, the number of CSWs exceeded the number of males present by approximately 4 to 1. In addition to the CSWs themselves, other hotel staff, including doormen, bartenders, security personnel, and women who were stationed at desks outside the elevators of every hotel floor each played some role in facilitating contact with potential clients. Anecdotal reports by hotel staff indicated that approximately 500 CSWs, known as *international girls* or *interdevochka* (Marsh, 1996), "worked" the hotel, with approximately 150 present at

any one time, somewhat more apparent during the evening hours. Interviews at the hotel were conducted in peripheral areas of the hotel lobby, or in booths within one of the cocktail lounges.

For all three sites, data collection always was in the presence of at least one of the principal investigators, who maintained a discreet distance to permit confidentiality. Sometimes, peer-interviewers consulted with one of the investigators to seek clarity about a question or a response. CSWs at each site knew the interviewer as another worker, appeared to feel relaxed about answering the questions, and completed the interview without protest. The interviewer documented the data by checking off the responses on the interview schedule as each question was asked. Notes also were written by the interviewer which were shared subsequently with the investigators after the completion of each interview. All interviews were conducted in the CSWs' native language (Spanish in Santo Domingo and Tijuana; Russian in Moscow). Time constraints, safety issues, and other intervening factors prohibited some interview questions from being asked in Tijuana and Moscow.

Data were analyzed using SPSS for Windows 8.0 (SPSS, 1997). Frequency distributions are reported. Where special or unique findings occurred, crosstabulations are reported by city. Pertinent anecdotal data are also presented.

Results

The refusal rate to be interviewed among CSWs was between 10% and 15% and was fairly constant across the three cities. Once initiated, no interviews were halted due to the content of the questions. In all, 78 commercial sex workers were interviewed: 10 in Tijuana, 50 in Santo Domingo, and 18 in Moscow. Their age ranged from 16 to 50 years of age, with a mean age of 27 years. The respondents were all females (94.9%), except for four males in Santo Domingo who were dressed in women's clothing and makeup. Results are reported in Table 1.

Examination of the findings indicate that specific HIV knowledge varies and that some myths about modes of transmission still abound. Concerning selected knowledge and beliefs about HIV/AIDS, the following data were generated:

- Had heard of AIDS (100%)
- Knew of a place to be tested for the AIDS virus (85.9%)
- Knew that the AIDS virus could be contracted from blood or semen (96.2%)

Table 1 Responses to Interview Questions Asked of Commercial Sex Workers in Three Cities

	Tijuana (n=10)		Santo Domingo (n=50)		Moscow (n=18)		Total (n=78)	
	n	%	n	%	n	%	n	%
Have you ever heard of HIV (the AIDS virus)?	10	100	50	100	18	100	78	100
Do you know of a place (clinic) that you can be tested for HIV/AIDS?	10	100	39	78.0	18	100	67	85.9
Have you ever been tested for HIV?	9	90	36	72	18	100	63	80.8
Were the results positive?	3	30	3	6	1	5.6	7	9
Have you ever been treated for another sexually transmitted infection?	10	100	5	10	2	11.1	17	21.8
Is there a cure for AIDS?	Not asked		5	10	8	44.4	13	19.1 ^a
Can a person get the AIDS virus from blood or semen?	9	90	48	96	18	100	67	96.2
Can a person get the AIDS virus from sharing a needle?	10	100	46	92	18	100	74	94.9
Will condom use help to prevent AIDS?	Not asked		46	92	18	100	54	94.1 ^a
Do you perform oral sex on clients?	6	60	25	50	14	77.8	45	57.7
Do you have oral sex performed on you by clients?	Not asked		26	52	12	66.7	38	55.9
Do you allow anal sex performed on you by clients?	4	40	6	12	3	16.7	13	16.7
Do you normally ask the client to use a condom?	7	70	50	100	18	100	75	96.2
Would you take more money to not use a condom?	9	90	4	8	3	16.7	16	20.5
Do you work (have sex) when you have a sore or lesion?	Not asked		1	2	2	11.1	3	4.4 ^a
Do you allow a client to have sex with you if he has a sore or lesion?	Not asked		3	6	1	5.6	4	5.9 ^a
Can you get AIDS from a mosquito?	8	80	39	78	Not asked		47	78.3 ^a
Are you a female (or male)?	10	100	46	92	18	100	74	94.9
Mean age of sample (years)	30		26		28		27	
Age range of sample (years)	23 – 48		16 - 49		19 – 50		16 - 50	

^a Percentage based on combined sample for two cities in which item was asked

- Knew that the AIDS virus could be contracted from sharing a needle with an infected person (94.9%)
- Knew that using a condom could help prevent transmission of the AIDS virus (94.1%)
- Believed that a cure had been discovered for AIDS (19.1% overall, but crosstabulation indicated that the figure was 44.4% among Muscovite CSWs)
- Believed that the AIDS virus could be contracted from mosquitoes (78.3%)

In addition, among respondents, 80.8% had been HIV-tested at least once. Seven of the CSWs (9.0%) indicated that test results revealed them to be HIV-positive. When asked about other sexually transmitted infections (STIs), 21.8% responded that they had been treated for an STI. Crosstabulation showed that 100% of the women in the Tijuana sample reported being treated for an STI at least once.

Although most of the CSWs were knowledgeable about HIV and were aware of its life-threatening consequences, economics rather than safe sex considerations became the main bargaining tool in negotiations with potential clients. Although 94.1% reported knowing that a condom can help prevent HIV transmission, and 96.2% reported that they ask their clients to wear a condom, 20.5% of the CSWs were willing to have male clients not wear a condom in exchange for accepting more money in return. The actual percentage of HIV-positive CSWs may be underreported considering the stigma and potential impact that revealing such information could have on client recruitment. The prevalence of HIV-positive CSWs poses a risk to persons purchasing services from them, and willingness of some CSWs to perform services unprotected in exchange for more money places them at risk as well, especially as the number of sexual exchanges increases.

Discussion

These results offer a limited look at the HIV-related risks of commercial sex workers in three diverse settings. Considering the numerous CSWs worldwide, this study presents only a snapshot of the risk activity of 78 workers. The findings should be interpreted cautiously, considering the sensitivity of surveys concerning sex for hire. Like any other sexuality study using a self-reported method, there is uncertainty regarding the accuracy of the information reported. Other limitations include the modest effort to establish psychometric properties for the interview schedule across language and culture. Moreover, peer

interviewers were trained quickly even though one of the investigators rehearsed several times with each interviewer. Additionally, interviewer bias could not be ruled out. The effect of setting could make the quality of information obtained suspect.

At least one study has compared the risk of CSWs on the street with CSWs who are employed in a brothel or have their own residence (Deren, Sanchez, Shedlin, Davis, Beardsley, Jarlais & Miller (1996). These risks, as noted earlier, are external factors surrounding life on the street and are shared commonly with drug abusers, homeless people, street children and others who spend much of their time on the street (Westhoff, Coulter, McDermott & Holcomb, 1995). The greatest risk for CSWs found in this study, and was typical at all three sites, was the negotiating power the client appears to have over the worker. Furthermore, with clients who refuse to pay or who threaten violence, insisting on use of a condom might only exacerbate the risk. Being on the margin of society, the ability of CSWs to negotiate safer working conditions is limited. Moreover, a CSW's financial position can make her vulnerable to customers willing to pay more money for unprotected sex and other high-risk practices (Day, 1988).

It has been shown here and in similar studies (e.g., Karim, et al., 1995) that sex with a condom does bring a reduced price during the negotiations. As Karim, et al. (1995) point out, sustaining sufficient earnings while using a condom requires CSWs to take on more clients. More clients means increasing the competition among the workers, as well as risk. Older women, such as a 50-year-old Muscovite CSW who was interviewed for this study, already have more difficulty attracting clients than their younger co-workers, and are less apt to insist on condom use. The limited knowledge of the client may be a further impediment for the woman who is trying to reduce her sexual risk. It is unknown how much information a client has about HIV, although it could be assumed that anyone seeking a CSW, and then willing to pay additionally for a "condomless act" may himself have a knowledge deficiency about HIV/AIDS. This lack of knowledge places an even greater burden on the negotiations. The skewness in negotiating prowess between a CSW and a client is not uncommon (Deren, et al., 1996; Ford, Wirawan & Fajans, 1998; Karim, et al., 1995).

The roots of prostitution in some of the cities studied in this paper have direct links to prevailing economic conditions. In the former Soviet Union, it is estimated that one out of every eight school girls aspires to be a "hard currency" call girl when she grows

up (Goscilo, 1996). A 1990 survey showed that the then Soviet women ranked prostitution 8th in a list of what they felt to be the top 20 occupations in the USSR. Around the same time, one-third of high school girls reported that they would exchange sex for hard currency (Goscilo, 1996). According to one report, some prostitutes engaged in sexual activities for as little as \$0.40 in U.S. currency (Kon, 1995). There seems to be a strong positive link between prostitution in Russia and the rise in cases of HIV/AIDS and other sexually transmitted infections, such as syphilis, where the Russian rate is estimated to be 100 times higher than the average rate in the countries that comprise the European Union (McAdams, 1997; St. Petersburg Press, 1997).

Kon (1995) reports the following demographic profile of prostitutes working in Moscow: 87% under the age of 25 years (with 50% under the age of 18 years); 9.1% entered the CSW trade before age 14; and 12% began their CSW career after being raped. In the same study, 9.1% reported having a university education. Moreover, two-thirds of Muscovite prostitutes have no income outside of the CSW trade, one-fourth were married, one-fifth had children, and one in seven had one or more sexually transmitted infections (Kon, 1995).

Prostitution is an economic endeavor for Russian women with limited economic choices. Between 1992 and 1993, 70% of Russians laid off from jobs were women (Marsh, 1996). This statistic alone makes the estimate of the existence of over 10,000 prostitutes in Moscow alone an easy one to understand. For some women, prostitution is the only alternative to a male enforced unemployment situation (McVicker, 1999). This situation has, perhaps, led to what Marsh (1996) labels as the "Madonna/whore complex," where the prostitute is divergently viewed as the "hooker with a heart of gold" and as a brash woman trying to claim superiority over men (McVicker, 1999).

A possible contribution to the status of both prostitution and sexually transmitted infection (including HIV/AIDS) rates in Russia today is the absence of state sanctioned sex education in schools during the days of Communist Party rule. At the same time, condoms were known to be in short supply, and many women never knew they were pregnant until they were in their fifth month following conception (Goscilo, 1996). Furthermore, Russia was not prepared for the onslaught of HIV/AIDS, and previous government-sponsored programs may have led citizens

to believe that only homosexuals and drug users contracted the disease (Kon, 1995; McVicker, 1999).

The Russian experience may not be typical of prostitutes everywhere, but it graphically describes the plight of women in economic strife who have a narrow range of options to sustain a living wage. In Tijuana, women reportedly came to work in industrial plants but could not support themselves on the \$30 per month minimum wage (World Sex Guide Document, 1999). Prostitution is not explicitly forbidden in Mexico, but is selectively enforced by police and other government agencies. The result of these vague and inconsistent guidelines has been the establishment of "prostitution worker unions" that stage sit-ins and marches to protest police corruption, combat police "shutdowns," and make provisions for CSWs to obtain monthly medical examinations performed by doctors of their own choosing or ones provided by the city.

In the Dominican Republic, a strategy known as "provocative theater," where skits about HIV/AIDS are put on in bars and brothels by theater groups, has been used to reach CSWs (Castillo & Moreno, 1997). Through this technique, actors facilitate audience participation in the construction of solutions to problems encountered in the commercial sex industry. In addition, CSW peer educators, serving as "health messenger leaders" focused on gender issues and self-esteem empowerment, are credited for being responsible for documented declines in syphilis, gonorrhea, and HIV seroprevalence in Santo Domingo (Moreno, Ferreira, Rosario & Bella, 1997). These peer educators produce a newsletter (called *La Nueva Historia*) with a distribution greater than 5000 copies per month.

As indicated earlier, some CSWs in the Santo Domingo sample were cross-dressing men. Other reports document the presence of cross-dressing men in the commercial sex industry, as well as their receptivity to such risk activities as anal and oral sex, and rates of HIV seroprevalence (Tabet, de Moya, Holmes, Krone, de Quinones, de Lister, Garris, Thorman, Castellanos, Swenson, Dallabetta & Ryan, 1996).

Conclusion

It is recommended that HIV-prevention outreach workers be knowledgeable of the risks associated with the CSW population. Peer educators have been shown to be an effective tool in some outreach programs (Karim, et al., 1995; Montague & Catino, 1996; Moreno, et al., 1997; Wong, et al., 1994-95). With training, former CSWs are able to distribute HIV literature and condoms, and, to some extent, modify

behavior. A significant HIV-risk reduction among CSWs will come about only when they are empowered by enhanced HIV knowledge and greater self-efficacy. Outreach programs can assist by: (1) increasing the CSWs' negotiation and communication skills, (2) informing and providing access to barrier methods that will give the women greater control over negotiations, and (3) improving access to health care services. According to McVicker (1999), in places such as Russia, "education and the dispersion of condoms at the local level will help to alleviate some of the problems but not the entire situation."

According to Cohen (1994, p.5): "Finally, it must be recognized that selling sex is a transaction with buyers as well as sellers that has flourished throughout human history. Prevention messages warning men not to have sex with prostitutes have not been effective. Furthermore, if HIV prevention messages say only 'don't have sex with prostitutes,' instead of 'use condoms when you have sex with prostitutes or others you don't know,' then men who continue to patronize prostitutes will not understand their responsibility to use condoms. In fact, guidelines for self-protection and partner protection for prostitutes are the same as for other sexually active adults."

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